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| 1. Record Nr. | UNINA9910484330603321 |
| Titolo | Authentication of embedded devices : technologies, protocols and emerging applications // editor, Basel Halak |
| Pubbl/distr/stampa | Cham, Switzerland : , : Springer, , [2021] ©2021 |
| ISBN | 3-030-60769-0 |
| Edizione | [1st edition 2021.] |
| Descrizione fisica | 1 online resource (XV, 188 p. 74 illus., 36 illus. in color.) |
| Disciplina | 621.3815 |
| Soggetti | Integrated circuits - Verification Embedded computer systems Electronic circuits Computer engineering Computer organization Internet of things Microprocessors |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Introduction -- Integrated Circuit Fingerprinting -- Novel PUF designs for device Identification -- Authentication Protocols: Standards, limitation and research opportunities -- Hardware-based Authentication Protocols for better physical security -- Energy Efficient Authentication Protocols -- Case study 1: Securing Hardware Supply Chain -- Case study 2: GPS spoofing attack detection and survival. |
| Sommario/riassunto | This book provides comprehensive coverage of state-of-the-art integrated circuit authentication techniques, including technologies, protocols and emerging applications. The authors first discuss emerging solutions for embedding unforgeable identifies into electronics devices, using techniques such as IC fingerprinting, physically unclonable functions and voltage-over-scaling. Coverage then turns to authentications protocols, with a special focus on resource-constrained devices, first giving an overview of the limitation of existing solutions and then presenting a number of new protocols, which provide better physical security and lower energy dissipation. |

The third part of the book focuses on emerging security applications for authentication schemes, including securing hardware supply chains, hardware-based device attestation and GPS spoofing attack detection and survival. Provides deep insight into the security threats undermining existing integrated circuit authentication techniques; Includes an in-depth discussion of the emerging technologies used to embed unforgeable identifiers into electronics systems; Offers a comprehensive summary of existing authentication protocols and their limitations; Describes state-of-the-art authentication protocols that provide better physical security and more efficient energy consumption; Includes detailed case studies on the emerging applications of IC authentication schemes.
